Anthony Cuffe

iPac'14 Technical Debrief

Dresden, German

2014 JACoW Team Meeting

Melbourne, Australia

IPAC14

JACoW

Jefferson Lab

Overview

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IPAC14

5th
INTERNATIONAL PARTICLE
ACCELERATOR CONFERENCE

June 15 - 20, 2014
Dresden | Germany

HOSTED BY HZDR

ORGANIZING COMMITTEE CHAIR: Andrzej Wolski (University of Liverpool)
SCIENTIFIC PROGRAMME COMMITTEE CHAIR: Gianluigi Arduini (CERN)
LOCAL ORGANIZING COMMITTEE CHAIR: Peter Michel (HZDR)

LOCATION International Congress Center Dresden

Special Thanks

Siegmar Lieber, HZDR
iPac'14 IT Coordinator

JACoW Developers
Raphael Muller
Ivan Andrian
Volker Schaa
Jan Chrin
Stefano Deiuri
Matt Arena

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Hardware

- ⊙ Editor's Windows Workstation (20)
  - ○ Fujitsu Esprimo P720, E90+, Intel Core i5
  - ○ 8 GB RAM
  - ○ 256 GB SSD
  - ○ 24" Fujitsu B24W-6 LED Display (1920x1200)

- ⊙ Editor's Mac Workstation (2)
  - ○ 27" iMac

- ⊙ Printers (2)
  - ○ HP LaserJet 500 color M551

- ⊙ 24 Port Network Switch (2)
  - ○ Unmanaged

- ⊙ Backup Server
  - ○ Editor's Workstation with 500GB drive and 16 GB RAM

- ⊙ Spares
  - ○ 24" Monitor (2)
  - ○ Editor's Workstation (2)

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Proceedings Office

Hardware

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Hardware

Hardware

- Windows Workstation (4)
  - Fujitsu Esprimo P720, E90+, Intel Core i5
  - 8 GB RAMM
  - 256 GB SSD
  - 24" Fujitsu B24W-6 LED Display

- 8 Port Network Switch (1)
  - Unmanaged

- Wireless Networking

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Author's Reception

Hardware

- ⊙ Windows Presenter Laptop (4)
  - ○ Fujitsu Lifebook E753 Intel Core i5
  - ○ 15,6" TFT, 8 GB RAMM (2560x1600)
  - ○ 256 GB SSD
  - ○ 1 used for

- ⊙ Mac Presenter Laptop (2)
  - ○ 13" Macbook Pro

- ⊙ 8 Port Network Switch (1)
  - ○ Unmanaged

- ⊙ Spares
  - ○ Macbook Pro (1)
  - ○ Lifebook E753 (1)

- ⊙ Wireless Networking

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Speaker Preparation

Hardware

- ⊙ Windows Presenter Laptop (2)
  - ○ Fujitsu Lifebook E753 Intel Core i5
  - ○ 15,6″ TFT, 8 GB RAMM
  - ○ 256 GB SSD
  - ○ Exact same as used in Speaker Preparation!

- ⊙ Mac Presenter Laptop (1)
  - ○ 13″ Macbook Pro
  - ○ Exact same as used in Speaker Preparation!

- ⊙ Timer Laptop (2)
  - ○ JACoW developed java timer application
  - ○ www.jacow.org >> Tools >> Software
  - ○ Auto start Firefox with local copy
  - ○ Required configuration in the source code.
  - ○ No network connection neccessary !

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Auditoriums – Two Parallel Sessions

Hardware

- ⊙ **Windows Workstation (3)**
  - Fujitsu Esprimo P720, E90+, Intel Core i5
  - 8 GB RAMM
  - 256 GB SSD
  - 24" Fujitsu B24W-6 LED Display

- ⊙ **Mac Presenter Laptop (1)**
  - 13" Macbook Pro

- ⊙ **Printers (1)**
  - HP LaserJet 500 color M551

- ⊙ **8 Port Network Switch (1)**
  - Unmanaged

- ⊙ **Laptop Spaces (4)**
  - Wireless Available
  - Wired Connections Available

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Paper Café
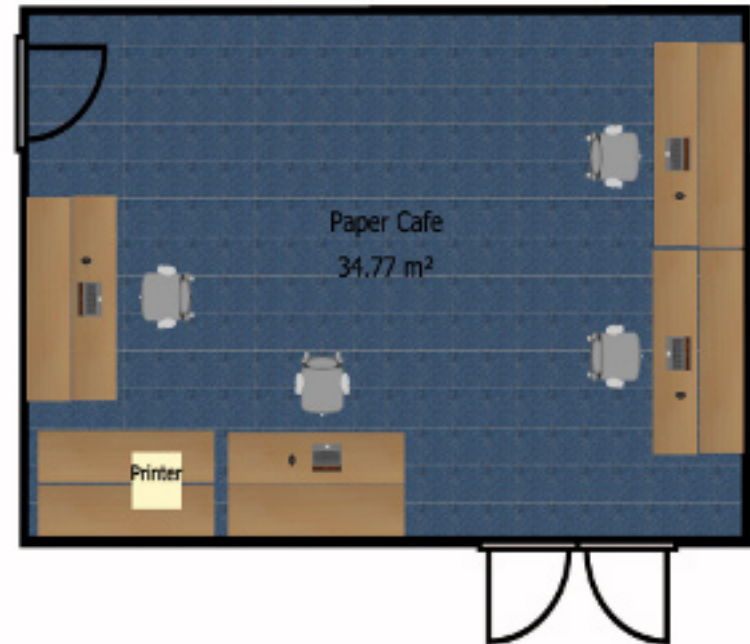
Hardware

- Windows Workstation (2)
  - Fujitsu Esprimo P720, E90+, Intel Core i5
  - 8 GB RAMM
  - 256 GB SSD
  - 24" Fujitsu B24W-6 LED Display

- Multi-Function Printer
  - Not utilized

- 8 Port Network Switch (1)
  - Unmanaged

- Wireless Networking

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Hardware

- ⊙ Mac Workstation (2)
  - ○ 27″ iMac
  - ○ Provided by Venue
- ⊙ Multi-Function Printer
  - o Provided by Venue
- ⊙ Wireless Networking

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Registration

Hardware

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Hardware

- ⊙ Ubuntu Workstations (10)
  - ○ Intel NUC PC Intel Core i3
  - ○ 4 GB RAMM
  - ○ 120 GB SSD
  - ○ Ubuntu Kiosk Mode – Firefox Auto launch

-

- ⊙ 24 Port Network Switch (1)
  - ○ Unmanaged

- ⊙ Laptop Spaces (4)
  - ○ Wireless Available
  - ○ Wired Connections Available

only 4"x4"

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Internet Café

Hardware

⊙ Dot Boards (3)

- ○ 42″ Plasma Display
- ○ Mini PC Shuttle X6110XA Slim PC
- ○ Rented from Convention Center

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Dot Boards

Hardware - Summary

- PC Workstations (~27) (851€)
- iMac Workstation (2) (700 €)
- Internet Workstation (10) (364 €)
- Backup Server (1) (1084 €)
  - Editor's Workstation with 500GB drive and 16 GB RAM
- 24″ (1920x1200) Monitors (39) (264 €)

- Windows Laptops (6) (1168 €)
- MacBook Laptops (5) (480 €)

- Network Switches (10)
- Printers (4)
  - HP LaserJet 500 color M551 (3) (460 €)
  - HP Multi-Function (1) – Not used (423 €)

Rented
Purchased

- Dot Boards (3) (1067 €)
  - 42″ Plasma Display
  - Mini PC Shuttle X6110XA Slim PC

- ⌘ Spares
  - 24″ Monitors
  - Editor's Workstation
  - Internet Workstation
  - Windows Laptop
  - Mac Laptop
  - Toner Cartridges for Printer

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Hardware

Networking

- **1 Gb Venue Bandwidth**
- Hard Wires
  - 1 Hard Wire drop in each location
  - Giga-Bit Switches (9) for distribution
    - 8, 16 and 24 Port
    - Rented from Venue
  - 3 Isolated VLANs
    - ⌘ VLAN1: Staff Offices
      - Proceedings
      - Speaker Prep
      - Auditoriums
      - Business Offices
    - ⌘ VLAN2: Internet Café
    - ⌘ VLAN3: Wi-Fi
  - QOS on VLANs
    - ⌘ Quality of Service to guarantee bandwidth
    - ⌘ No issues -- not used

- Costs for Network Drops, Rentals and Wireless – 12000 €

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Networking - Wireless

- ⊙ Wireless
  - ○ 32 Wireless Access Points for entire venue
  - ○ 19 dedicated for the poster sessions and the industrial exhibition level
  - ○ Portable access points for quick coverage fixes
  - ○ Sized for 1200-1300 Delegates

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Networking
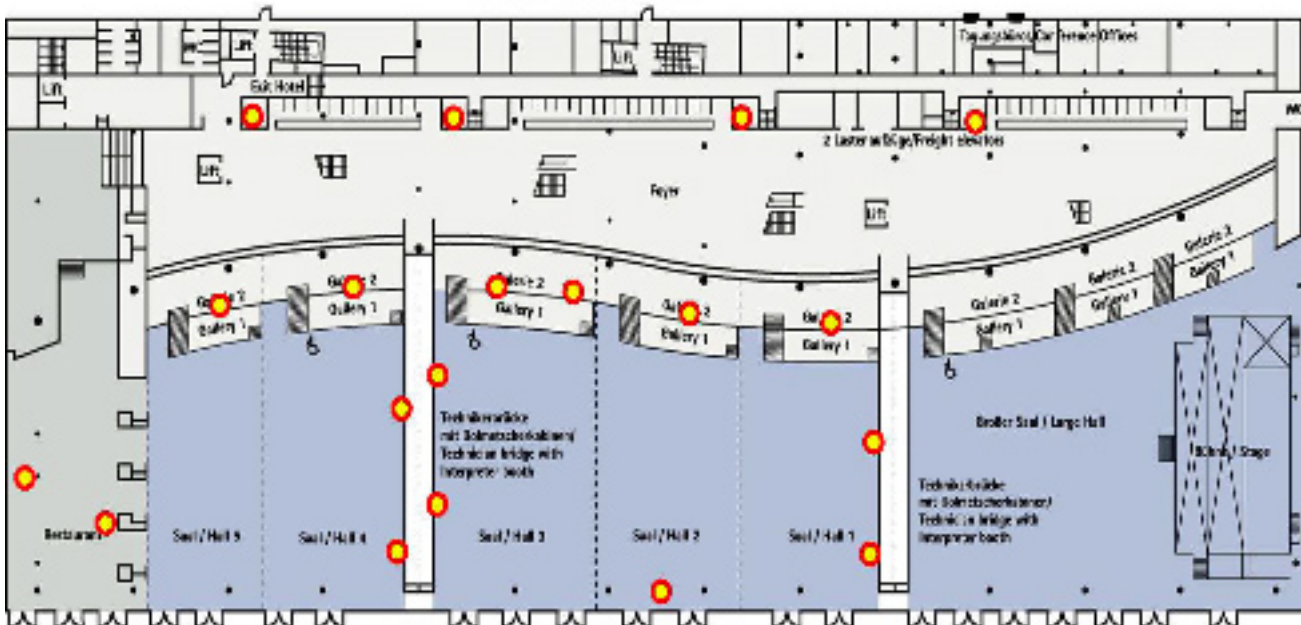
Software – Proceedings Office

- Editor's Windows Workstations
  - JACoW automated bundle utilized for initial image(*Raphael*)
    - Software List: http://www.jacow.org/index.php?n=Editors.RecommendedSoftware
  - Master system cloned and replicated
  - Manual configuration of PitStop, Acrob at Pro and MsWord
    - Procedures: http://www.jacow.org/index.php?n=Editors.SoftwareSettings
    - Took less than (5) minutes per workstation
- Editor's Mac Workstations
  - Manual configuration of PitStop, Acrobat Pro and MsWord
    - Procedures: *http://www.jacow.org/index.php?n=Editors.SoftwareSettings*
    - Took around (20) minutes per workstation
- Red/Yellow/Green Dot Plugin (*Ivan*)
    - Plugin to tag papers in lieu of stickers
    - Manual install
    - Saved time, money and looked pretty

Software – Speaker Preparation and Auditoriums

◉ Windows and MacBook Pro Laptops – *All identically configured!*

○ JACoW automated bundle utilized for initial install (*Raphael*)
- Software List: *http://www.jacow.org/index.php?n=Editors.RecommendedSoftware*

○ Manual configuration of other software using *Ninite (ninite.com)*
- Ninite – installs or updates multiple apps at once – ninite.com

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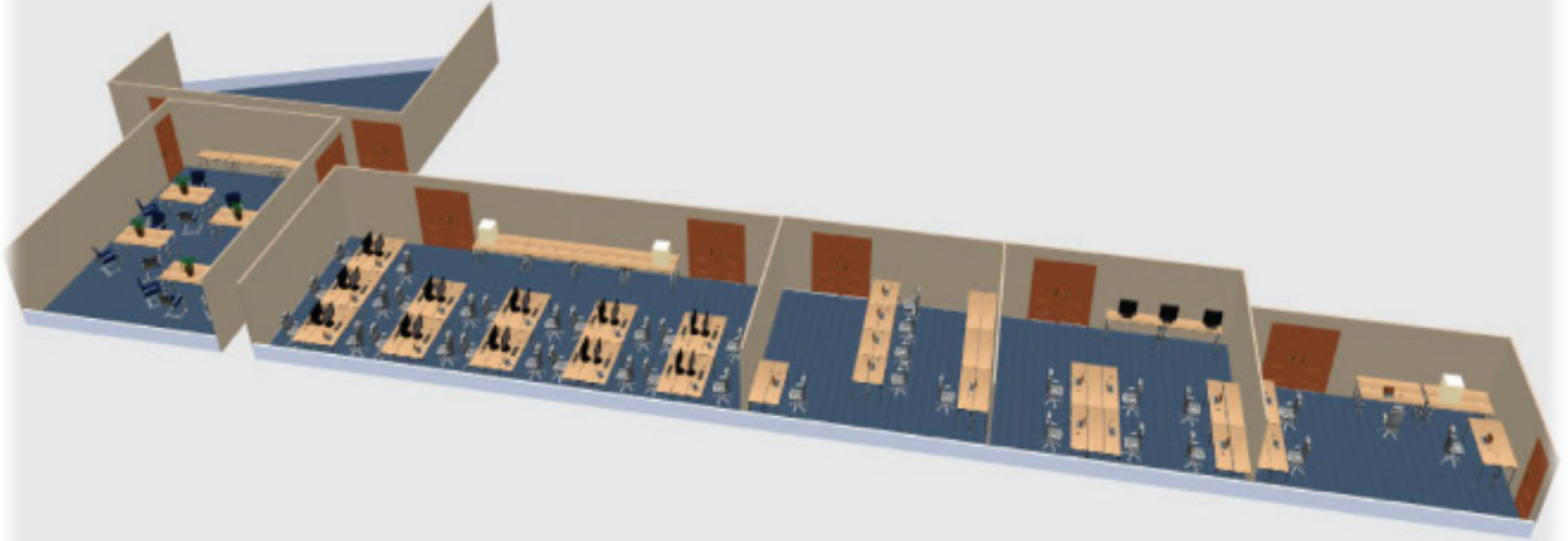
Space Planning

- Layouts created for all IT spaces (Siegmar and Raphael)
- Layouts created with *Sweet Home 3D* (free interior design application)
- Spaces were perfectly laid out and provide plenty of space for editors.
- No surprises – everything fit!
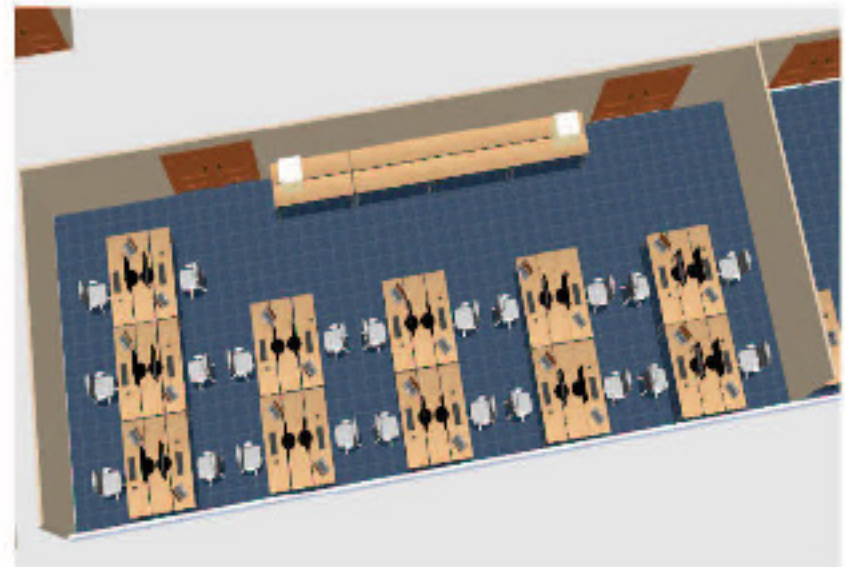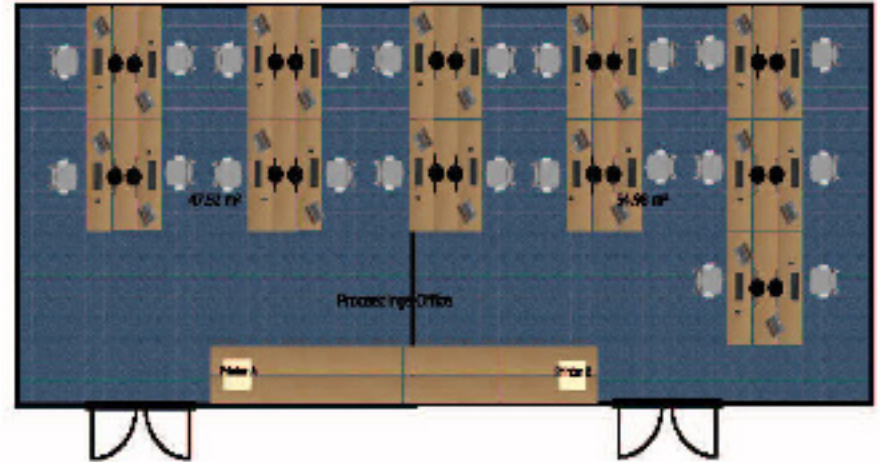
Space Planning

Ergonomics – Proceedings Office and Author's Reception

⦿ **Workspaces**
- Deep enough to work with printed papers.
- Enough Space for Laptops and to put other gear.
- Extra chairs (and space) for visiting authors.

⦿ **Chairs**
- Ergonomic, height adjustable chairs.
- Comfortable for Editors to sit for 8-12 hours a day.

⦿ **Lighting**
- Lots of natural light from windows.
- Bright workspaces for reading papers.

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Usage Statistics

- Paper Consumption: 9600+
  - Proceedings Office: ~9.000 pages
  - Paper Café: ~620 pages
  - Business Office: Multifunctional printer not used
  - Only one Toner cartridge change

- Papers/Talks Processed: ~1300

- Network Bandwidth
  - Bandwidth of internet connection for all network areas: 1 GBit/s
  - Measurement of data rate on an individual PC:
   - download: 120 MBit/s
    - upload: 110 MBit/s

- Devices on Wireless
  - 650+ registered devices
  - 400-550 average per day in exhibition hall (600 peak)

What went right? *Everything!*

- Staff clearly learned from lessons of the past.
- Hardware specs were very high.
- Spares were readily available.
- Systems were installed and nearly flawless before Editors arrived.
  - Systems were patched and configured prior to cloning.
  - Very little post setup configuration was necessary.
  - Editing began before most editors arrived.
  - L.O.C. Admins were knowledgeable and quick to respond to anything.
- Network Bandwidth was huge (1Gb) and it showed!
- Wireless Networking was flawless in nearly all areas.
- Near perfect IT meant free time for staff.

What went right? Free Time and the *World Cup!!!!!*
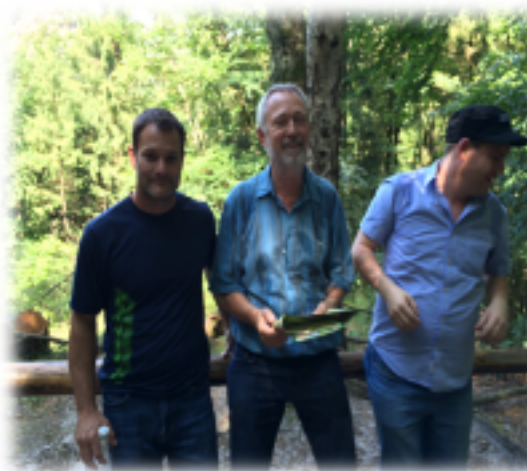
What could have gone better?

- WiFi at edges of building was not very good at start of conference.
  - This was dealt with by re-positioning portable access points.

- IT/AV needs for breakout meetings were not communicated beforehand to the IT planners.

- Laptop timer application required some re-write.
  - The aspect ratio was written for small screen sizes.
  - Perhaps this could be re-written to auto scale.

- The U.S.A Team could have played better!

More Information

- IT Documentation Bundle from iPac'14 (Siegmar)
  IPAC14_IT.zip (uploaded as supplemental file to SPMS)

- Previous IT Reports
  http://www.jacow.org/index.php?n=Editors.ITReportsPreviousExperiences

- Recommended Software List
  http://www.jacow.org/index.php?n=Editors.RecommendedSotware

- Proceedings Office: Recommended Hardware
  http://www.jacow.org/index.php?n=Editors.RecommendedHardware

- JACoW Information for Organizers
  http://www.jacow.org/index.php?n=Editors.HomePage

Q & A